EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	09/853451	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/30 16:48
L2	25	("5098526" | "5147819" | "5389575" | "5480814" | "5525837" | "5550084" | "5668411" | "5719446" | "5847459" | "5847463" | "5856707" | "5883433" | "5893752" | "5903054" | "5933758" | "5939788" | "5968333" | "6069068" | "6100194" | "6140231" | "6174799" | "6217721").PN. OR ("6545357").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/07/30 16:49
L3	561	((barrier and seed) and thick$4 and (via open$3 trench slot)).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/30 16:50
L4	16	3 and ((barrier same (zirconium hafnium "Zr" "Hf"))).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 16:51
L5	44	3 and (aluminum same seed).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 16:52
S1	11	(("6436787") or ("6362012") or ("20020047153") or ("5940319") or ("6153443") or ("6197688") or ("6465867") or ("5741626") or ("6312874") or ("5821168") or ("6194304")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/08/25 12:21
S2	0	((("6436787") or ("6362012") or ("20020047153") or ("5940319") or ("6153443") or ("6197688") or ("6465867") or ("5741626") or ("6312874") or ("5821168") or ("6194304")).PN.) and seed and (barrier or adhes$4) and coper and aluminum	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 13:00
S3	3	((("6436787") or ("6362012") or ("20020047153") or ("5940319") or ("6153443") or ("6197688") or ("6465867") or ("5741626") or ("6312874") or ("5821168") or ("6194304")).PN.) and seed and (barrier or adhes$4) and copper and aluminum	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 13:00
S4	45	("2842438"|"20010002333"|"20020014646"|"20020028552"|"20020096768"|"20020109233"|"3954570"|"4386116"|"4394223"|"4423547"|"4565157"|"4574095"|"4762728"|"4788082"|"4847111"|"4931410"|"4962058"|"4984459"|"4996584"|"5019531"|"5034799"|"5084412"|"5100499"|"5130274"|"5158986"|"5173442"|"5231056"|"5240878"|"5243222"|"5256205"|"5334356"|"5354712"|"5371042"|"5384284"|"5413687"|"5426330"|"5442237"|"5447887"|"5470789"|"5470801"|"5506449"|"5538922"|"5539060"|"5595937"|").pn.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 13:46
S5	48	("5609721"|"5635253"|"5654245"|"5670420"|"5674787"|"5679608"|"5681441"|"5695810"|"5719089"|"5719410"|"5739579"|"5763953"|"5780358"|"5785570"|"5792522"|"5801098"|"5814557"|"5821168"|"5824599"|"5858877"|"5891797"|"5891804"|"5895740"|"5897370"|"5907772"|"5911113"|"5925930"|"5930669"|"5932928"|"5940733"|"5948467"|"5962923"|"5972179"|"5972804"|"5976710"|"5981350"|"5985759"|"5989623"|"5994777"|"6008117"|"6015465"|"6017820"|"6030877"|"6065424"|"6069068"|"6071810"|"6100193"|"6126989").pn.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 13:46
S6	37	("6136095"|"6139699"|"6140228"|"6140234"|"6143646"|"6150261"|"6153507"|"6159769"|"6171661"|"6177350"|"6183564"|"6187656"|"6190732"|"6197688"|"6207222"|"6207553"|"6207558"|"6211049"|"6211073"|"6221763"|"6232219"|"6249056"|"6265311"|"6271592"|"6284656"|"6287954"|"6323553"|"6326303"|"6359328"|"6372622"|"6376370"|"6387542"|"6399489"|"6403481"|"6420262"|"6426289"|"6429120").PN.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 13:46

S7	130	((("2842438"|"20010002333"|"20020014646"|"20020028552"|"20020096768"|"20020109233"|"3954570"|"4386116"|"4394223"|"4423547"|"4565157"|"4574095"|"4762728"|"4788082"|"4847111"|"4931410"|"4962058"|"4984459"|"4996584"|"5019531"|"5034799"|"5084412"|"5100499"|"5130274"|"5158986"|"5173442"|"5231056"|"5240878"|"5243222"|"5256205"|"5334356"|"5354712"|"5371042"|"5384284"|"5413687"|"5426330"|"5442237"|"5447887"|"5470789"|"5470801"|"5506449"|"5538922"|"5539060"|"5595937|").pn.) ((("5609721"|"5635253"|"5654245"|"5670420"|"5674787"|"5679608"|"5681441"|"5695810"|"5719089"|"5719410"|"5739579"|"5763953"|"5780358"|"5785570"|"5792522"|"5801098"|"5814557"|"5821168"|"5824599"|"5858877"|"5891797"|"5891804"|"5895740"|"5897370"|"5907772"|"5911113"|"5925930"|"5930669"|"5932928"|"5940733"|"5948467"|"5962923"|"5972179"|"5972804"|"5976710"|"5981350"|"5985759"|"5989623"|"5994777"|"6008117"|"6015465"|"6017820"|"6030877"|"6065424"|"6069068"|"6071810"|"6100193"|"6126989").pn.) ((("6136095"|"6139699"|"6140228"|"6140234"|"6143646"|"6150261"|"6153507"|"6159769"|"6171661"|"6177350"|"6183564"|"6187656"|"6190732"|"6197688"|"6207222"|"6207553"|"6207558"|"6211049"|"6211073"|"6221763"|"6232219"|"6249056"|"6265311"|"6271592"|"6284656"|"6287954"|"6323553"|"6326303"|"6359328"|"6372622"|"6376370"|"6387542"|"6399489"|"6403481"|"6420262"|"6426289"|"6429120").PN.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 13:46
S8	153	farrar-paul-a.in.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 15:09
S9	23	farrar-paul-a.in. and (seed adj layer) and via$2 and barrier	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 15:31
S10	5	(farrar-paul-a.in. and (seed adj layer) and via$2 and barrier) and ((seed adj layer) and via$2 and barrier).clm.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 13:54
S11	21	("2842438" | "4762728" | "4847111" | "4962058" | "5084412" | "5130274" | "5158986" | "5173442" | "5231056" | "5654245" | "5670420" | "5763953" | "5824599" | "5891797" | "5948467" | "5994777" | "6071810" | "6140228" | "6171661" | "6197688" | "6207222").PN.	USPAT	OR	ON	2004/08/27 13:54
S12	9	("4574095" | "4789648" | "4894260" | "4985750" | "5151168" | "5183795" | "5192581" | "5240497" | "5580668").PN.	USPAT	OR	ON	2004/08/27 13:59
S13	40	(((("2842438"|"20010002333"|"20020014646"|"20020028552"|"20020096768"|"20020109233"|"3954570"|"4386116"|"4394223"|"4423547"|"4565157"|"4574095"|"4762728"|"4788082"|"4847111"|"4931410"|"4962058"|"4984459"|"4996584"|"5019531"|"5034799"|"5084412"|"5100499"|"5130274"|"5158986"|"5173442"|"5231056"|"5240878"|"5243222"|"5256205"|"5334356"|"5354712"|"5371042"|"5384284"|"5413687"|"5426330"|"5442237"|"5447887"|"5470789"|"5470801"|"5506449"|"5538922"|"5539060"|"5595937|").pn.) ((("5609721"|"5635253"|"5654245"|"5670420"|"5674787"|"5679608"|"5681441"|"5695810"|"5719089"|"5719410"|"5739579"|"5763953"|"5780358"|"5785570"|"5792522"|"5801098"|"5814557"|"5821168"|"5824599"|"5858877"|"5891797"|"5891804"|"5895740"|"5897370"|"5907772"|"5911113"|"5925930"|"5930669"|"5932928"|"5940733"|"5948467"|"5962923"|"5972179"|"5972804"|"5976710"|"5981350"|"5985759"|"5989623"|"5994777"|"6008117"|"6015465"|"6017820"|"6030877"|"6065424"|"6069068"|"6071810"|"6100193"|"6126989").pn.) ((("6136095"|"6139699"|"6140228"|"6140234"|"6143646"|"6150261"|"6153507"|"6159769"|"6171661"|"6177350"|"6183564"|"6187656"|"6190732"|"6197688"|"6207222"|"6207553"|"6207558"|"6211049"|"6211073"|"6221763"|"6232219"|"6249056"|"6265311"|"6271592"|"6284656"|"6287954"|"6323553"|"6326303"|"6359328"|"6372622"|"6376370"|"6387542"|"6399489"|"6403481"|"6420262"|"6426289"|"6429120").PN.)) and (seed adj layer) and via$2 and barrier and via$2 and substrate	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 14:02

| S14 | 34 | (((("2842438"|"20010002333"|"20020014646"|"20020028552"|"20020096768"|"20020109233"|"3954570"|"4386116"|"4394223"|"4423547"|"4565157"|"4574095"|"4762728"|"4788082"|"4847111"|"4931410"|"4962058"|"4984459"|"4996584"|"5019531"|"5034799"|"5084412"|"5100499"|"5130274"|"5158986"|"5173442"|"5231056"|"5240878"|"5243222"|"5256205"|"5334356"|"5354712"|"5371042"|"5384284"|"5413687"|"5426330"|"5442237"|"5447887"|"5470789"|"5470801"|"5506449"|"5538922"|"5539060"|"5595937"|").pn.) (("5609721"|"5635253"|"5654245"|"5670420"|"5674787"|"5679608"|"5681441"|"5695810"|"5719089"|"5719410"|"5739579"|"5763953"|"5780358"|"5785570"|"5792522"|"5801098"|"5814557"|"5821168"|"5824599"|"5858877"|"5891797"|"5891804"|"5895740"|"5897370"|"5907772"|"5911113"|"5925930"|"5930669"|"5932928"|"5940733"|"5948467"|"5962923"|"5972179"|"5972804"|"5976710"|"5981350"|"5985759"|"5989623"|"5994777"|"6008117"|"6015465"|"6017820"|"6030877"|"6065424"|"6069068"|"6071810"|"6100193"|"6126989").pn.) ((("6136095"|"6139699"|"6140228"|"6140234"|"6143646"|"6150261"|"6153507"|"6159769"|"6171661"|"6177350"|"6183564"|"6187656"|"6190732"|"6197688"|"6207222"|"6207553"|"6207558"|"6211049"|"6211073"|"6221763"|"6232219"|"6249056"|"6265311"|"6271592"|"6284656"|"6287954"|"6323553"|"6326303"|"6359328"|"6372622"|"6376370"|"6387542"|"6399489"|"6403481"|"6420262"|"6426289"|"6429120").PN.)) and (seed adj layer) and via$2 and barrier and via$2 and substrate) not farrar-paul-a.in. | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2004/08/27 14:02 |
| S15 | 33 | ((((("2842438"|"20010002333"|"20020014646"|"20020028552"|"20020096768"|"20020109233"|"3954570"|"4386116"|"4394223"|"4423547"|"4565157"|"4574095"|"4762728"|"4788082"|"4847111"|"4931410"|"4962058"|"4984459"|"4996584"|"5019531"|"5034799"|"5084412"|"5100499"|"5130274"|"5158986"|"5173442"|"5231056"|"5240878"|"5243222"|"5256205"|"5334356"|"5354712"|"5371042"|"5384284"|"5413687"|"5426330"|"5442237"|"5447887"|"5470789"|"5470801"|"5506449"|"5538922"|"5539060"|"5595937"|").pn.) (("5609721"|"5635253"|"5654245"|"5670420"|"5674787"|"5679608"|"5681441"|"5695810"|"5719089"|"5719410"|"5739579"|"5763953"|"5780358"|"5785570"|"5792522"|"5801098"|"5814557"|"5821168"|"5824599"|"5858877"|"5891797"|"5891804"|"5895740"|"5897370"|"5907772"|"5911113"|"5925930"|"5930669"|"5932928"|"5940733"|"5948467"|"5962923"|"5972179"|"5972804"|"5976710"|"5981350"|"5985759"|"5989623"|"5994777"|"6008117"|"6015465"|"6017820"|"6030877"|"6065424"|"6069068"|"6071810"|"6100193"|"6126989").pn.) ((("6136095"|"6139699"|"6140228"|"6140234"|"6143646"|"6150261"|"6153507"|"6159769"|"6171661"|"6177350"|"6183564"|"6187656"|"6190732"|"6197688"|"6207222"|"6207553"|"6207558"|"6211049"|"6211073"|"6221763"|"6232219"|"6249056"|"6265311"|"6271592"|"6284656"|"6287954"|"6323553"|"6326303"|"6359328"|"6372622"|"6376370"|"6387542"|"6399489"|"6403481"|"6420262"|"6426289"|"6429120").PN.)) and (seed adj layer) and via$2 and barrier and via$2 and substrate) not farrar-paul-a.in.) and (insulat$4 or oxide or dielectric) | US-PGPUB; USPAT; EPO; JPO; IBM_TDB | OR | ON | 2004/08/27 14:03 |

EAST Search History

S16	17	((((((("2842438"|"20010002333"|"20020014646"|"20020028552"|"20020096768"|"20020109233"|"3954570"|"4386116"|"4394223"|"4423547"|"4565157"|"4574095"|"4762728"|"4788082"|"4847111"|"4931410"|"4962058"|"4984459"|"4996584"|"5019531"|"5034799"|"5084412"|"5100499"|"5130274"|"5158986"|"5173442"|"5231056"|"5240878"|"5243222"|"5256205"|"5334356"|"5354712"|"5371042"|"5384284"|"5413687"|"5426330"|"5442237"|"5447887"|"5470789"|"5470801"|"5506449"|"5538922"|"5539060"|"5595937"|").pn.) (("5609721"|"5635253"|"5654245"|"5670420"|"5674787"|"5679608"|"5681441"|"5695810"|"5719089"|"5719410"|"5739579"|"5763953"|"5780358"|"5785570"|"5792522"|"5801098"|"5814557"|"5821168"|"5824599"|"5858877"|"5891797"|"5891804"|"5895740"|"5897370"|"5907772"|"5911113"|"5925930"|"5930669"|"5932928"|"5940733"|"5948467"|"5962923"|"5972179"|"5972804"|"5976710"|"5981350"|"5985759"|"5989623"|"5994777"|"6008117"|"6015465"|"6017820"|"6030877"|"6065424"|"6069068"|"6071810"|"6100193"|"6126989").pn.) (("6136095"|"6139699"|"6140228"|"6140234"|"6143646"|"6150261"|"6153507"|"6159769"|"6171661"|"6177350"|"6183564"|"6187656"|"6190732"|"6197688"|"6207222"|"6207553"|"6207558"|"6211049"|"6211073"|"6221763"|"6232219"|"6249056"|"6265311"|"6271592"|"6284656"|"6287954"|"6323553"|"6326303"|"6359328"|"6372622"|"6376370"|"6387542"|"6399489"|"6403481"|"6420262"|"6426289"|"6429120").PN.)) and (seed adj layer) and via$2 and barrier and via$2 and substrate) not farrar-paul-a.in.) and (insulat$4 or oxide or dielectric)) and (polymer or polyimide)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 14:04
S17	26	("2842438" | "3954570" | "4386116" | "4788082" | "4931410" | "4962058" | "5100499" | "5158986" | "5173442" | "5240878" | "5256205" | "5334356" | "5470789" | "5470801" | "5506449" | "5635253" | "5659193" | "5674787" | "5679608" | "5681441" | "5695810" | "5717236" | "5785570" | "5913147" | "5982040" | "6107657").PN.	USPAT	OR	ON	2004/08/27 14:05
S18	3	"6465867"	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 15:58
S19	6	("6057237" | "6136682" | "6140231" | "6144096" | "6146993" | "6348732").PN.	USPAT	OR	ON	2004/08/27 15:09
S20	2	("6136682" | "6181012").PN.	USPAT	OR	ON	2004/08/27 15:11
S21	1	"6465867".URPN.	USPAT	OR	ON	2004/08/27 15:12
S22	2	"6348732".URPN.	USPAT	OR	ON	2004/08/27 15:12
S23	6	("4933743" | "4933754" | "6127258" | "6326305" | "6348732" | "6417566").PN.	USPAT	OR	ON	2004/08/27 15:13
S24	2	("6136682" | "6181012").PN.	USPAT	OR	ON	2004/08/27 15:14
S25	2	"6348732".URPN.	USPAT	OR	ON	2004/08/27 15:15
S26	57	substrate and (conductor adj core) and (channel adj stop) and (barrier with adhesion) and (seed adj layer)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 15:58
S27	57	(substrate and (conductor adj core) and (channel adj stop) and (barrier with adhesion) and (seed adj layer)) and (dielectric or insulat$4) and (contact$4 or plug) and copper	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 15:59

S28	57	((substrate and (conductor adj core) and (channel adj stop) and (barrier with adhesion) and (seed adj layer)) and (dielectric or insulat$4) and (contact$4 or plug) and copper) not (((("2842438"|"20010002333"|"20020014646"|"20020028552"|"20020096768"|"20020109233"|"3954570"|"4386116"|"4394223"|"4423547"|"4565157"|"4574095"|"4762728"|"4788082"|"4847111"|"4931410"|"4962058"|"4984459"|"4996584"|"5019531"|"5034799"|"5084412"|"5100499"|"5130274"|"5158986"|"5173442"|"5231056"|"5240878"|"5243222"|"5256205"|"5334356"|"5354712"|"5371042"|"5384284"|"5413687"|"5426330"|"5442237"|"5447887"|"5470789"|"5470801"|"5506449"|"5538922"|"5539060"|"5595937|").pn.) (("5609721"|"5635253"|"5654245"|"5670420"|"5674787"|"5679608"|"5681441"|"5695810"|"5719089"|"5719410"|"5739579"|"5763953"|"5780358"|"5785570"|"5792522"|"5801098"|"5814557"|"5821168"|"5824599"|"5858877"|"5891797"|"5891804"|"5895740"|"5897370"|"5907772"|"5911113"|"5925930"|"5930669"|"5932928"|"5940733"|"5948467"|"5962923"|"5972179"|"5972804"|"5976710"|"5981350"|"5985759"|"5989623"|"5994777"|"6008117"|"6015465"|"6017820"|"6030877"|"6065424"|"6069068"|"6071810"|"6100193"|"6126989").pn.) (("6136095"|"6139699"|"6140228"|"6140234"|"6143646"|"6150261"|"6153507"|"6159769"|"6171661"|"6177350"|"6183564"|"6187656"|"6190732"|"6197688"|"6207222"|"6207553"|"6207558"|"6211049"|"6211073"|"6221763"|"6232219"|"6249056"|"6265311"|"6271592"|"6284656"|"6287954"|"6323553"|"6326303"|"6359328"|"6372622"|"6376370"|"6387542"|"6399489"|"6403481"|"6420262"|"6426289"|"6429120").PN.)) farrar-paul-a.in.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 16:14
S29	14	("6083835" | "6100184" | "6114243" | "6130161" | "6157081" | "6159845" | "6258713" | "6261950" | "6274499" | "6281127" | "6288448" | "6309970" | "6323135" | "6350678").PN.	USPAT	OR	ON	2004/08/27 16:03
S30	10	("5483568" | "5772780" | "5804513" | "6103625" | "6123088" | "6143662" | "6191027" | "6200901" | "6221775" | "6232231").PN.	USPAT	OR	ON	2004/08/27 16:06
S31	4	"6326305".URPN.	USPAT	OR	ON	2004/08/27 16:06
S32	14	("6083835" | "6100184" | "6114243" | "6130161" | "6157081" | "6159845" | "6258713" | "6261950" | "6274499" | "6281127" | "6288448" | "6309970" | "6323135" | "6350678").PN.	USPAT	OR	ON	2004/08/27 16:08
S33	3	("5928962" | "6227949" | "6235071").PN.	USPAT	OR	ON	2004/08/27 16:09
S34	3	"6350678".URPN.	USPAT	OR	ON	2004/08/27 16:09
S35	40	("2842438" | "4565157" | "4762728" | "4847111" | "4962058" | "5084412" | "5130274" | "5158986" | "5173442" | "5231056" | "5240878" | "5371042" | "5413687" | "5609721" | "5654245" | "5670420" | "5763953" | "5824599" | "5891797" | "5948467" | "5962923" | "5972179" | "5994777" | "6017820" | "6065424" | "6015465" | "6071810" | "6136095" | "6136699" | "6140228" | "6143646" | "6153507" | "6171661" | "6177350" | "6183564" | "6190732" | "6197688" | "6207222" | "6265311" | "6271592").PN.	USPAT	OR	ON	2004/08/27 16:13
S36	13	"6277263"	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/27 16:14
S37	17	(US-6465867-$ or US-6207222-$ or US-5824599-$ or US-6287954-$ or US-6069068-$ or US-6348732-$ or US-6146993-$ or US-6140231-$ or US-6144096-$ or US-6136682-$ or US-6181012-$ or US-6541860-$ or US-6326305-$ or US-6127258-$ or US-4933743-$ or US-6350678-$ or US-6277263-$).did.	USPAT	OR	OFF	2004/08/30 17:02
S38	3	((US-6465867-$ or US-6207222-$ or US-5824599-$ or US-6287954-$ or US-6069068-$ or US-6348732-$ or US-6146993-$ or US-6140231-$ or US-6144096-$ or US-6136682-$ or US-6181012-$ or US-6541860-$ or US-6326305-$ or US-6127258-$ or US-4933743-$ or US-6350678-$ or US-6277263-$).did.) and liner	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/30 17:07

EAST Search History

S39	2	(titanium adj silicide adj liner) and (metallization) and via$2 and (insulat$4 and substrate)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/30 17:09
S40	2	titanium adj silicide adj liner	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/30 17:09
S41	17	silicide adj liner	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/30 17:09
S42	15	(silicide adj liner) not (titanium adj silicide adj liner)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2004/08/30 17:09
S43	18	(US-4933743-$ or US-5824599-$ or US-6069068-$ or US-6127258-$ or US-6136682-$ or US-6140231-$ or US-6144096-$ or US-6146993-$ or US-6181012-$ or US-6207222-$ or US-6277263-$ or US-6287954-$ or US-6326305-$ or US-6348732-$ or US-6350678-$ or US-6376368-$ or US-6465867-$ or US-6541860-$).did.	USPAT	OR	OFF	2005/03/02 16:45
S44	180	farrar-paul-a.in.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2005/03/02 16:19
S45	1384	substrate and (via or opening)and seed and barrier and (dielectric or insulat$4) and metal$4 and angstrom	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2005/03/02 16:47
S46	1362	S45 not (S43 S44)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2005/03/02 16:47
S47	100	S46 and ("Hf" or hafnium) and ("Zr" or zirconium)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2005/03/02 16:47
S48	49	S47 and (polyimide or polymer)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2005/03/02 16:48
S49	34	S48 and (etch$4 adj (barrier or stop))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2005/03/02 17:11
S50	15	S48 not S49	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2005/03/02 16:56
S51	10	(("5937320") or ("6103320") or ("6208016") or ("6245662") or ("6288442") or ("6358849") or ("6552432") or ("6614099") or ("6743716") or ("6756298")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2005/03/02 17:01
S52	1	"20040217481"	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2005/03/02 17:12
S53	3	(("20050023699") or ("20040217481") or ("20050023697")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2005/03/02 17:12

S54	10	("5633200"|"6143655"|"6169024"|"6215186"|"6258707"|"628844 7"|"6417094"|"6492266"|"6589863"|"6740392").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 16:01
S55	7	(("5348811") or ("5401680") or ("5789264") or ("6143671") or ("6251781") or ("6303498") or ("6365511")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2006/01/31 18:57
S56	6947	(substrate or board or motherboard or "PCB" or "PWB") and (insulat$3 or dielectric) and barrier and seed and metal$4 and (via or trench or open$3 or groove or slot) and thickness	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 19:13
S57	5400	S56 and ((second or upper or above or over or top) with (dielectric or insulat$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 19:01
S58	1492	S57 and (@rlad<"20000118" or @ad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 19:14
S59	439	S58 and ((dielectric or insulat$3) with (polymer or polyim$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 19:03
S60	46	S59 and (zirconium)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 19:04
S61	83	((substrate or board or motherboard or "PCB" or "PWB") and (insulat$3 or dielectric) and barrier and seed and metal$4 and (via or trench or open$3 or groove or slot) and thickness).clm.	US-PGPUB	OR	ON	2006/08/26 19:10
S62	83	S61 not S60	US-PGPUB	OR	ON	2006/01/31 19:13
S63	10	S62 and (@rlad<"20000118" or @ad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 19:15
S64	73	S62 not S63	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 19:18
S65	1440	257/751.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2006/01/31 19:18
S66	63	("5171712"|"5635423"|"5985762"|"6001736"|"6037664"|"605439 8"|"6107186"|"6117781"|"6117782"|"6121149"|"6121150"|"6143 604"|"6143650"|"6174800"|"6184121"|"6194317"|"6204096"|"62 11071"|"6224690"|"6228754"|"6232230"|"6239017"|"6261946"|" 6262376"|"6280640"|"6319834"|"6368965"|"6410418"|"6410442 "|"6515323"|"6518173"|"6710447").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:25

S67	95	("2842438"|"20010002333"|"20020014646"|"20020028552"|"200 20096768"|"20020109233"|"20050023697"|"20050023699"|"395 4570"|"4213818"|"4386116"|"4394223"|"4423547"|"4565157"|"4 574095"|"4762728"|"4788082"|"4847111"|"4931410"|"4962058"| "4984459"|"4996584"|"5019531"|"5034799"|"5084412"|"510049 9"|"5130274"|"5158986"|"5171712"|"5173442"|"5231056"|"5240 878"|"5243222"|"5256205"|"5334356"|"5348811"|"5354712"|"53 71042"|"5384284"|"5401680"|"5413687"|"5426330"|"5442237"| "5447887"|"5461243"|"5470789").pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 12:22
S68	98	("5470801"|"5506449"|"5538922"|"5539060"|"5595937"|"560972 1"|"5633200"|"5635253"|"5635423"|"5654245"|"5670420"|"5674 787"|"5679608"|"5681441"|"5695810"|"5719089"|"5719410"|"57 39579"|"5763953"|"5780358"|"5785570"|"5789264"|"5792522"|" 5801098"|"5814557"|"5821168"|"5824599"|"5858877"|"5891797 "|"5891804"|"5895740"|"5897370"|"5907772"|"5911113"|"59259 30"|"5930669"|"5932928"|"5937320"|"5940733"|"5948467"|"596 2923"|"5972179"|"5972804"|"5976710"|"5981350"|"5985759"|"5 985762"|"5989623").pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 12:24
S69	99	("5994777"|"6001736"|"6008117"|"6015465"|"6017820"|"603087 7"|"6037664"|"6054398"|"6065424"|"6069068"|"6071810"|"6100 193"|"6103320"|"6107186"|"6117781"|"6117782"|"6120641"|"61 21149"|"6121150"|"6126989"|"6136095"|"6139699"|"6140228"|" 6140234"|"6143604"|"6143646"|"6143650"|"6143655"|"6143671 "|"6150261"|"6153507"|"6159769"|"6169024"|"6171661"|"61748 00"|"6177350"|"6183564"|"6184121"|"6187656"|"6190732"|"619 4317"|"6197181"|"6197688"|"6204096"|"6207222"|"6207553"|"6 207558"|"6208016"|"6211049").pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 12:24
S70	95	("6211071"|"6211073"|"6215186"|"6221763"|"6224690"|"622875 4"|"6232219"|"6232230"|"6239017"|"6245662"|"6249056"|"6251 781"|"6255217"|"6258707"|"6261946"|"6262376"|"6265311"|"62 71592"|"6277263"|"6280640"|"6284656"|"6287954"|"6288442"|" 6288447"|"6290833"|"6303498"|"6313035"|"6319834"|"6323553 "|"6326303"|"6350678"|"6350687"|"6358849"|"6359328"|"63616 67"|"6365511"|"6368965"|"6368966"|"6372622"|"6376368"|"637 6370"|"6387542"|"6399489"|"6403481"|"6410418"|"6410442"|"6 417094"|"6420262").pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 12:25
S71	44	("6426289"|"6428673"|"6429120"|"6486533"|"6492266"|"650892 0"|"6515323"|"6518173"|"6552432"|"6562416"|"6565729"|"6573 182"|"6589863"|"6614099"|"6632345"|"6638410"|"6664197"|"66 74169"|"6710447"|"6740392"|"6743716"|"6756298").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 12:25
S72	420	S66 S67 S68 S69 S70 S71	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 12:25
S73	110	S72 and (seed and barrier) and (via trench contact plug)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:11
S74	10	S73 and ((via trench contact plug) with liner)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 12:26
S75	22	("2842438" | "4762728" | "4847111" | "4962058" | "5084412" | "5130274" | "5158986" | "5173442" | "5231056" | "5654245" | "5670420" | "5763953" | "5824599" | "5891797" | "5948467" | "5994777" | "6071810" | "6140228" | "6171661" | "6197688" | "6207222").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/08/25 12:27

S76	1	10/789882	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 19:48
S77	13	"6358849"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 13:40
S78	6	S77 and (polyme$3 polyimide)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 13:41
S79	63	("5171712"|"5635423"|"5985762"|"6001736"|"6037664"|"6054398"|"6107186"|"6117781"|"6117782"|"6121149"|"6121150"|"6143604"|"6143650"|"6174800"|"6184121"|"6194317"|"6204096"|"6211071"|"6224690"|"6228754"|"6232230"|"6239017"|"6261946"|"6262376"|"6280640"|"6319834"|"6368965"|"6410418"|"6410442"|"6515323"|"6518173"|"6710447").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:25
S80	23	S79 and (seed and barrier) and (via trench contact plug)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:29
S81	0	S80 and (barrier with (zirconium or "Zr"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:32
S82	0	S80 and (barrier same (zirconium or "Zr"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:27
S83	1	S80 and (zirconium or "Zr")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:27
S84	2022	(substrate wafer) and (seed and barrier) and (via trench contact plug) and (zirconium or "Zr")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:30
S85	1937	S84 and (aluminum or "Al")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:30
S86	558	S84 and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:18

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S88	551	S85 and S86	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:31
S89	51	S88 and (barrier with (zirconium or "Zr"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:49
S90	25	S89 and (barrier with ((tantalum near2 nitride) or "TaN"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:49
S91	26	S89 not S90	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:47
S92	65	(S88 not S89) and (barrier same (zirconium or "Zr"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 17:49
S93	18	S92 and (barrier with ((tantalum near2 nitride) or "TaN"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 18:08
S94	47	S92 not S93	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 18:02
S95	2	"6989593"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/25 19:48

S96	133	("20010001505" | "20010040279" | "20010045644" | "20020053731" | "20020072214" | "20020096767" | "20020098617" | "20020171144" | "20020180040" | "20020185717" | "20030138613" | "20040072456" | "3790866" | "4611238" | "5045921" | "5065281" | "5173766" | "5208504" | "5216278" | "5285352" | "5291062" | "5294826" | "5366589" | "5394009" | "5397917" | "5397921" | "5409865" | "5433631" | "5438216" | "5474957" | "5490324" | "5534467" | "5541450" | "5552635" | "5572405" | "5578869" | "5583377" | "5583378" | "5642261" | "5648679" | "5650659" | "5650662" | "5691567" | "5717252" | "5736785" | "5744863" | "5796170" | "5798909" | "5801432" | "5835355" | "5843808" | "5844168" | "5856911" | "5866949" | "5883430" | "5889321" | "5889324" | "5894410" | "5895967" | "5901041" | "5903052" | "5905633" | "5907189" | "5907903" | "5920117" | "5949137" | "5953589" | "5972734" | "5976912" | "5977626" | "5977633" | "5982621" | "5986340" | "5986885" | "5998241" | "5999415" | "6002147" | "6002169" | "6011304" | "6011694" | "6020221" | "6020637" | "6028358" | "6034427" | "6040984" | "6057601" | "6060777" | "6069407" | "6077724" | "6084297" | "6084777" | "6114761" | "6117797" | "6122171" | "6133064" | "6140707" | "6160705" | "6162659" | "6163458" | "6166434" | "6184580" | "6201300" | "6207467" | "6212070" | "6242279" | "6246111" | "6278613" | "6288444" | "6313521" | "6313525" | "6347037" | "6362525" | "6369455" | "6376907" | "6380623" | "6462274" | "6472741" | "6525942" | "6528869" | "6528892" | "6541832").PN. OR ("6545351" | "6552266" | "6552428" | "6552430" | "6563712" | "6583516" | "6614660" | "6617193" | "6657870" | "6664617" | "6724071" | "6724080").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/08/26 18:13
S97	133	("20010001505" | "20010040279" | "20010045644" | "20020053731" | "20020072214" | "20020096767" | "20020098617" | "20020171144" | "20020180040" | "20020185717" | "20030138613" | "20040072456" | "3790866" | "4611238" | "5045921" | "5065281" | "5173766" | "5208504" | "5216278" | "5285352" | "5291062" | "5294826" | "5366589" | "5394009" | "5397917" | "5397921" | "5409865" | "5433631" | "5438216" | "5474957" | "5490324" | "5534467" | "5541450" | "5552635" | "5572405" | "5578869" | "5583377" | "5583378" | "5642261" | "5648679" | "5650659" | "5650662" | "5691567" | "5717252" | "5736785" | "5744863" | "5796170" | "5798909" | "5801432" | "5835355" | "5843808" | "5844168" | "5856911" | "5866949" | "5883430" | "5889321" | "5889324" | "5894410" | "5895967" | "5901041" | "5903052" | "5905633" | "5907189" | "5907903" | "5920117" | "5949137" | "5953589" | "5972734" | "5976912" | "5977626" | "5977633" | "5982621" | "5986340" | "5986885" | "5998241" | "5999415" | "6002147" | "6002169" | "6011304" | "6011694" | "6020221" | "6020637" | "6028358" | "6034427" | "6040984" | "6057601" | "6060777" | "6069407" | "6077724" | "6084297" | "6084777" | "6114761" | "6117797" | "6122171" | "6133064" | "6140707" | "6160705" | "6162659" | "6163458" | "6166434" | "6184580" | "6201300" | "6207467" | "6212070" | "6242279" | "6246111" | "6278613" | "6288444" | "6313521" | "6313525" | "6347037" | "6362525" | "6369455" | "6376907" | "6380623" | "6462274" | "6472741" | "6525942" | "6528869" | "6528892" | "6541832").PN. OR ("6545351" | "6552266" | "6552428" | "6552430" | "6563712" | "6583516" | "6614660" | "6617193" | "6657870" | "6664617" | "6724071" | "6724080").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/08/26 18:14
S98	0	("6989593").URPN.	USPAT	OR	ON	2006/08/26 18:14
S99	721	(substrate wafer "PCB" "PWB" board) and seed and (barrier same (zirconium "Zr" hafnium "Hf")) and (via trench contact plug) and (copper "Cu" aluminum "Al")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:42
S10 0	318	S99 and (barrier with (zirconium "Zr" hafnium "Hf"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:58

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S10 1	3	S100 and (((titanium near2 silicide) "TiSi") near2 liner)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:28
S10 2	34	S100 and (((titanium near2 silicide) "TiSi"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:18
S10 3	67	S100 and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:44
S10 4	15	S102 and S103	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:24
S10 5	7	09/145012	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:24
S10 7	52	S103 not (S101 S104 S105)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:30
S10 8	181	(substrate wafer "PCB" "PWB" board) and seed and (barrier same (zirconium "Zr" hafnium "Hf")) and (copper "Cu" aluminum "Al") and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:43
S10 9	114	S108 not (S101 S104 S105 S107)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:44
S11 0	0	S109 and (barrier with (zirconium "Zr" hafnium "Hf"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:05
S11 1	4442	(barrier with (zirconium "Zr" hafnium "Hf"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:43
S11 2	81	S111 and seed and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:30

EAST Search History

S11 3	14	S112 not (S101 S104 S105 S107)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:47
S11 4	382	((zirconium or "Zr") near2 barrier) and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:52
S11 5	374	S114 not (S101 S104 S105 S107 S113)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:00
S11 6	0	S115 and seed	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:48
S11 7	115	S115 and adhes$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:49
S11 8	55	S117 and (copper "Cu")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:49
S11 9	111	((hafnium or "Hf") near3 barrier) and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:52
S12 0	100	S119 not (S101 S104 S105 S107 S113)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:53
S12 1	0	S120 and seed	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:53
S12 2	29	S120 and adhesi$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 19:53
S12 3	3586	seed and barrier and (zirconium "Zr" hafnium "Hf") and (via plug contact hole trench slot) and (substrate wafer board "PCB" "PWB")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:01

S12 4	1024	S123 not (S101 S104 S105 S107 S113 S118 S122) and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:01
S12 5	113	S124 and (barrier same (zirconium "Zr" hafnium "Hf"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:05
S12 6	232	"5,916,365"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:05
S12 7	14	S126 and (barrier same (zirconium "Zr" hafnium "Hf"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:28
S12 8	3153	((two bi dual) near2 (layer film plate) near2 barrier) and (aluminum "Al")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:29
S12 9	80	S128 and seed and (via plug contact hole trench slot) and (substrate wafer board "PCB" "PWB") and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:31
S13 0	41	(US-20020020920-$ or US-20010010403-$ or US-20020096768-$ or US-20040169213-$ or US-20050285272-$ or US-20020094673-$ or US-20010034106-$ or US-20040130029-$).did. or (US-6288442-$ or US-6287954-$ or US-6258710-$ or US-6069068-$ or US-6614099-$ or US-6541860-$ or US-6465867-$ or US-6348732-$ or US-6181012-$ or US-6144096-$ or US-6207222-$ or US-5824599-$ or US-6146993-$ or US-6136682-$ or US-6127258-$ or US-4933743-$ or US-6140231-$ or US-6326305-$ or US-6350678-$ or US-6277263-$ or US-6376368-$ or US-6376370-$ or US-6071810-$ or US-6358849-$ or US-6849927-$ or US-5639316-$).did. or (US-6589874-$ or US-6399496-$ or US-6800552-$ or US-6353260-$ or US-6184138-$).did. or (US-2842438-$).did. or (EP-881673-$).did.	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2006/08/26 20:54
S13 1	6	S130 and ((bit word) adj line)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/26 20:55
S13 2	1372	257/762.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:29

S13 3	1570	257/751.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:37
S13 4	16138	257/462,751,758,750,e21.576,e21.584,e21.579,e21.585.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:41
S13 5	5867	438/633,689,690,628,692.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:41
S13 8	6	H01L23/532.ipc.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:42
S13 9	1834	H01L23/48.ipc.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:42
S14 0	1165	H01L21/302.ipc.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:42
S14 1	23340	S134 S135 S138 S139 S140	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:46
S14 2	826	S141 and (barrier same (zirconium hafnium "Zr" "Hf"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 19:54
S14 3	298	S142 and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:57
S14 4	226	S143 and (barrier same thick$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:59
S14 5	174	S144 and (barrier with thick$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 17:59

S146	58	S145 and seed	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 19:55
S147	116	S145 not S146	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 19:53
S148	46	((barrier same (zirconium hafnium "Zr" "Hf")) and seed).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/02 11:01
S149	28	S148 and thick$4.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/02 11:59
S150	18	S148 not S149	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/01 19:56
S151	15	(US-20020109233-$ or US-20040023486-$ or US-20040169213-$ or US-20040023489-$).did. or (US-5882738-$ or US-6171949-$ or US-6376370-$ or US-6703307-$ or US-6770559-$ or US-7105914-$ or US-7115498-$ or US-6015749-$ or US-6268291-$ or US-6727175-$ or US-6740392-$).did.	US-PGPUB; USPAT	OR	ON	2007/02/02 11:01
S152	6	S151 and ((barrier same (zirconium hafnium "Zr" "Hf")))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 16:51
S153	46	((barrier same (zirconium hafnium "Zr" "Hf")) and seed).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/02 11:59
S154	1	10/789882	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/02 11:59
S155	3	"7105914"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/02/04 17:26
S156	1438	257/762.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/26 17:21

S15 7	189	257/571.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/26 17:21
S15 8	14890	(barrier adhesi$3) same (zirconium hafnium "Zr" "Hf") and thick$4	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/30 16:50
S15 9	1283	S158 and (seed)	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/26 17:48
S16 0	321	S159 and (@ad<"20000118" @rlad<"20000118")	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/26 18:03
S16 1	59	S160 and (barrier with (dual double multi$3 plural$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/26 18:04
S16 2	23	S161 and (barrier near3 (dual double multi$3 plural$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/26 18:57
S16 3	36	S161 not S162	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/26 18:18
S16 4	3	09/089445	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/26 18:57
S16 5	7	("20010002333"|"20020167089"|"20060292857"|"20070085213" |"5451804"|"6022802"|"7211512").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2007/07/26 18:59